

# Chris Brough

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## EXPERIENCE

- **Programming Intern, Square Enix Montreal - Montreal, Quebec** *May 2013 - Present*
    - Engine, framework, tools, and gameplay engineering
  - **Mobile Programmer, Emergent Media Center - Burlington, VT** *May 2012 - August 2012*
    - Worked alongside artists, designers, and engineers to develop an iOS travel app
    - Accommodated for the UI/UX needs of the artists and designers, helped with asset integration process
    - Used agile development cycle, maintained git repository, tested and debugged app
  - **Assistant, Woodland Construction - St. Albans, VT** *January 2006 - August 2011*
    - Designed and remodeled homes as assistant to 1 general contractor
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## PROJECTS

- **Programmer, Heightmaps with Google Elevations** *November 2012*
    - Used Google Elevations API to generate heightmaps with C++ and OpenGL
    - Built with data in mind; data-oriented design
    - Threaded loading, temporary caching/reloading, URL encoding, JSON parser
  - **Lead Programmer, Sagittarii Run** *September 2012 - April 2013*
    - Built space racing game using C# in Unity3D with 1 producer, 2 programmers, 4 designers, and 3 artists
    - Created waypoint/checkpoint system using pathfinding to track player progress on track
    - Implemented and iterated on car hovering and handling mechanics
    - Used agile development cycle
  - **Programmer, Quadtree Level of Detail for Heightmaps** *April 2012*
    - Implemented dynamic level of detail for heightmaps with C++ and OpenGL
    - Generate height maps with perlin noise image files
  - **Game Programmer, Beatpad Defender** *January 2012 - April 2012*
    - Built musical tower defense game using C# in Unity3D with 1 producer, 3 designers, and 1 artist
  - **Game Programmer, Light** *November 2011 - December 2011*
    - Developed a 2D vertical platformer using C# in XNA 4.0
    - Applied 2D techniques: collisions, animations, particles, parallaxing, shaders
    - Created tiled map level editor with serialization to XML
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## SKILLS

### Languages

- C
- C++
- C#
- Objective-C
- Java
- Lua
- Python
- JavaScript
- ActionScript 3.0
- Bash script

### Libraries

- Make
- GLSL
- HLSL
- HTML
- CSS
- SQL
- XML
- JSON
- OpenGL
- DirectX 9.0c

- XNA 4.0
- Mono/MonoGame
- Allegro 5
- Win32 API
- **Edit, Compile, Debug**
- Visual Studio '08 - '12
- Vim
- Xcode 3 - 4
- Eclipse
- MonoDevelop
- FlashDevelop

- Bash
- gcc/g++
- clang/clang++
- gdb

### Version Control

- Git
- Subversion
- Perforce

### Software

- Unity3D
- Adobe Photoshop

- Adobe Flash
- Autodesk AutoCAD

### Operating Systems

- Windows
- Unix
- Linux

### Other

- Agile, Scrum
  - Graphics
  - Networking
  - Threading
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## EDUCATION

- **Bachelor of Science in Game Programming, Champlain College - Burlington, VT** *September 2009 - May 2013*
    - Cumulative GPA: 3.8
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## ACHIEVEMENTS

- **Champlain College**
  - Excellence in Game Programming *Spring 2012, Spring 2013*
  - Game Developers Conference Scholarship *Spring 2012, Spring 2013*
  - President's List *Spring 2010, Fall 2012*
  - Dean's List *Fall 2010, Spring 2011, Fall 2011, Spring 2012, Spring 2013*